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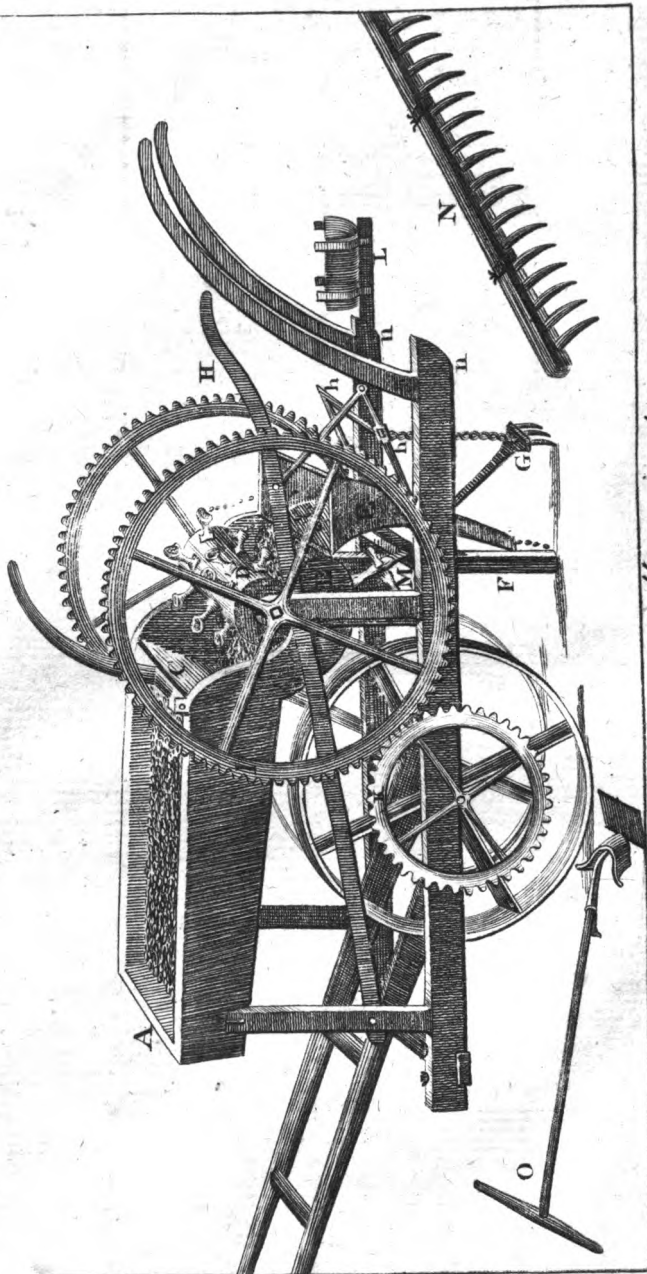
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C1716/RAZ



*Cook's Patent Drill Machine*

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# REFERENCES

TO THE ANNEXED  
 PLATE OF A PATENT DRILL-MACHINE,  
 AND OF A NEW-CONSTRUCTED SIMPLE  
 H A N D - H O E,  
 INVENTED BY THE  
 REV. JAMES COOKE,  
 No. 73. Opposite the PANTHEON, Oxford-Street,  
 L O N D O N.

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A, the upper part of the feed-box.

B, the lower part of the same box.

C, a moveable partition, with a lever, by which the grain or seed is let fall at pleasure from the upper to the lower part of the feed box, from whence it is taken up by cups or ladles applied to the cylinder D, and dropped into the funnel E, and conveyed thereby into the furrow or drill, made in the land by the coulter F, and covered by the rake or harrow G.

H a lever, by which the wheel I is lifted out of generation with the wheel K, to prevent the grain or seed being scattered upon the ground, while the machine is turning round at the end of the land, by which the harrow G is

A

also



also lifted from the ground at the same time, and by the same motion, by means of the crank and the horizontal lever *b.b.*

**L**, a sliding lever, with a weight upon it, by means of which, the depth of the furrows or drills, and consequently the depth that the grain or seed will be deposited in the land, may be easily ascertained.

**M**, a screw in the coulter beam, by turning of which, the seed-box **B** is elevated or depressed, in order to prevent the grain or seed being crushed or bruised by the revolution of the cups or ladles.

**N**, a rake for clearing land from quitch, and other useful purposes.

**O** is a new-constructed simple Hand-Hoe, by which one man, in light land, will effectually hoe two chain acres per day, earthing up the soil at the same time to the rows of corn or pulse, so as to cause roots to issue from the first joint of the stem, above the surface of the land, which otherwise would never have existed.

This side view of the machine is represented, for the sake of perspicuity, with one seed-box only, one coulter, one funnel, one harrow or rake, &c. whereas a complete machine is furnished with five coulters, five harrows, five funnels, a seed-box in five partitions, &c. with ladles of different sizes, for different sorts of grain and seeds.

These machines, equally excel in setting or planting all sorts of grain and seeds, even carrot seed, to great exactness, after the rate of from eight to ten chain acres per day,





day, with one man, a boy, and one horse in light, and two horses in strong lands. They deposit the grain or seed in any given quantity from one peck to three bushels per acre, regularly and uniformly, and that without grinding or bruising the seed, and at any given depth, from half an inch to half a dozen inches, in rows, at the distance of nine, twelve, eighteen, or thirty-six inches, or any other distance. They are equally useful on all lands, are durable, easy to manage, and by no means subject to be put out of repair.

*Directions for using the MACHINE.*

Each machine is furnished with two cylinders, with cups or ladles, by which the seed is distributed, of four different sizes for different sorts of grain or seeds, which may be distinguished by the numbers, 1, 2, 3, 4.

No. 1, (the smallest size, painted white) is calculated for lucern, clover-feed, cole-feed, rape, &c. and will sow something more than two pounds per statute acre. For sowing of turnip-feed, every other cup must be stopped up with a little clay; by which means, one pound of turnip-feed will sow an acre at twelve inches, which is the most approved distance for turnips.

No. 2, (painted red) for wheat, rye, hemp, flax, &c. and will sow something more than one bushel per acre.

No. 3, (painted green) for barley; and will sow upwards of one bushel and a half per acre.—N. B. When barley is sown at nine inches, the wheat-cups, No. 2, (painted red) should be used.

A 2

No. 4,

No. 4, (painted yellow) for beans, oats, peas, vetches, &c. and will sow upwards of two bushels per acre.

Notwithstanding the above specified quantities of grain or seeds per acre, a greater or less quantity of each may be sown at pleasure, by using the cups described as above, by which means the quantity of seed per acre is ascertained.

The funnels are all numbered, 1, 2, 3, 4, 5; and for sowing at the distance of nine inches, must be applied to their respective places, so as to correspond with the numbers 1, 2, 3, 4, 5, of the feed-box; for sowing at twelve inches the numbers 2 and 4 must be reversed, and no seed put in the middle box; but a piece of wood in the coulter-beam instead of the coulter, extending under the beam as far as the point of the funnel, or something farther, to prevent the funnel being displaced by clods or stones: and for sowing at eighteen inches, seed must be put into the boxes 1, 3, 5, (No. 2 and 4 being empty) and pieces of wood applied as above, before the funnels No. 2 and 4, to prevent their being displaced by clods or stones.

Care should be taken that the funnels stand directly behind the backs of the coulters, which is done by wedges being applied to one side or other of the coulters, at the time they are fixed in their respective places.

In order to find out the most advantageous distance of drilling upon different soils, it may be adviseable, indeed it is strongly recommended, to make experiments at different distances, viz. nine and twelve inches for wheat, rye, barley, oats, &c. Ditto at twelve and eighteen inches for  
beans,

beans, pease, &c. by which means the most approved distance may be readily ascertained upon different soils. From past experience it has appeared, that drills at the distance of nine inches, have been more productive than twelve, upon light sandy land, or weak exhausted land, or upon land very much out of condition; but upon strong productive soils, the reverse has been the consequence.

The machine being thus put together, which is done with great facility and expedition, the land also being previously ploughed, and harrowed if necessary, the driver should walk down the furrow or edge of the land or ridge intended to be sown; and having hold of the shaft-horse's head with his hand, he will readily keep him in such a direction as will bring the outside coulter of the machine within three or four inches of the edge of the land or ridge; at which uniform extent he should keep his arm, till he comes to the end of the land, where having turned round, he should go to the other side of the horse, and walking upon the last outside drill, having hold of the horse's head as before, he will readily keep the machine in such a direction as will strike the succeeding or adjoining drill, at such a distance from the last outside one, or that he walks upon, as shall be required.—N. B. The chains by which the shaft-horse draws, should be of equal lengths, and applied to the shafts at equal distances from the horse's collar, otherwise the machine will have a tendency to deviate from the horse's line of traction; in which case the drills will not be so straight, as with proper care and attention they otherwise might be.

The person that attends the machine cannot possibly  
commit

commit any errors, except such as are wilful, particularly as he sees at one view the whole process of the business, viz. that the coulters make the drills of a proper depth; that the funnels convey the grain or seed into the drills: that the rakes or harrows cover the grain or seed sufficiently; and when seed is wanting in the lower boxes B, which he cannot avoid seeing, he readily supplies them from the upper ones A, by applying his hand, as the machine goes along, to the lever C.

The lower boxes B should not be suffered to become empty before they are supplied with seed; they should be kept nearly full, or within an inch of the edge of the box. When the machine approaches the end of the land or ridge, the attendant should apply his right-hand to the middle of the cross-rail between the handles, by which means he will with more ease lift up the lever H, with his left-hand, which will prevent the seed being scattered upon the headland, while the machine is turning round; and by continuing his right-hand upon the cross-rail, and applying his left arm under the left handle of the machine, he will be better able to lift up the machine, so as to keep the coulters out of the ground, while it is turning round; always taking care, to put down the lever H, soon enough at the end of every land, that the cups or ladles may have time to fill, before he begins to sow. In going down-hill the boxes B should be more plentifully supplied with seed, and up-hill more sparingly than on level ground.

Here it may be necessary to observe, that if the land intended to be sown, is rough, and full of large clods, which may frequently happen on strong soils, a roller should be worked

worked on the surface, provided it is dry enough to admit of the operation; and on very strong clays, in dry seasons, the spiked roller may be used with good effect. And likewise that in order to strike the first drills in a right line, when a machine is first set to work, it may be advisable that a boy conduct the leading horse, observing the same rules as are laid down for the driver.

Clover and other lays intended to be sown by the machine should be ploughed strong and deep, and well harrowed, in order to level the surface; and when sown, if any of the seed appears in the drills uncovered by reason of the texture of the soil, or toughness of the roots, a light harrow may be drawn over the land, which will effectually cover the seed, without displacing it at all in the drills. But for sowing clover-lays, a set of wrought iron coulter, well steeled, and made sharp at the front edge and bottom, are recommended: they would divide the soil more readily, require less draught, and consequently expediate business. The expence of these coulters would be trifling.

Land intended to be sown by the machine with carrot-feed, should be ploughed as deep as possible, and for every half acre of land, one bushel of sawdust, and one pound of carrot-feed, should be provided; the saw-dust must be dried and sifted, to take out all the lumps and chips, and divided into eight equal parts or heaps; the carrot-feed having been likewise well dried and rubbed between the hands, to take off the beards, that it may more readily separate; and being also divided into eight equal parts, a part of the carrot-feed, and a part of the sawdust

dust must be well mixed and incorporated together, and so on, till all the parts of carrot-feed and saw-dust are respectively mixed and incorporated together, in which state it may be sown by the ladles, No. 2, already described. Carrot-feed resembling saw-dust very much in its size, roughness, weight, adhesion, &c. and being well mixed with saw-dust, will remain so mixed during the sowing. A ladleful of saw-dust will, upon an average, contain three or four carrot-seeds, by which means the carrot-feed will be as regularly distributed in the drills as any other grain or seeds whatever.

For sowing carrot-feed, turnip, &c. the lever L (see the plate) must be reversed, and a considerable weight applied to the end of it, to prevent the coulter making the drills too deep. If the person that attends the machine will make, with a piece of chalk, a line or stroke across the backs of the coulters, at such distance from the ends of them as the seed should be deposited in the land, he will be better able to balance the machine, by applying a greater or less weight to the lever L, so as to ascertain the exact depth of the drills, by observing whether the chalk lines are above or below the surface of the land when the machine is at work. Immediately after the sowing of small seeds, a light roller should be taken over the land, which will level the surface, and prepare it for an earlier hoeing than could otherwise have taken place.

It has always been found troublesome, sometimes impracticable, to sow any kind of grain or seeds in a high wind, even by hand. This inconvenience is entirely obviated,

viated, by placing a screen of any kind of cloth, or even a sack supported by two uprights applied to the sides of the machine, behind the funnels, which will prevent the grain or seeds being blown back into the boxes, from whence it was taken up by the ladles. The lightest seed (even woad-seed) has, by this means, been sown by the machine in a very high wind.

In different parts of the kingdom, lands or ridges are of different breadths: if the machine shall happen to be too wide for the land, one or more funnels may be stopped at pleasure, with a piece of loose paper, or any other similar substance, and the seed received into such funnel, returned into the upper seed-box. But for expedition and regularity lands or ridges consisting of so many feet wide, from outside to outside, exclusive of the water furrows, as the machine contains coulter, or twice or three times the number of feet, &c. that the machine has coulter, when fixed at the distance of twelve inches from each other, are best calculated for the machine. For sowing narrow high-ridged lands, the outside coulter should be let down, and the middle ones taken up, so that the points of the coulters may form the same curve that the land or ridge forms. In wet soils, ridges of the same width of the machine, and in dry soils, twice the width, are recommended.

If seed-wheat is brined and limed, it should be made so dry that it will readily separate, and the loose particles of lime should be sifted out, otherwise the grain, by clogging together, will not be so regularly distributed in the drills; this is done most expeditiously, by spreading it thin  
upon

upon a floor, a day or two before it is used. When the wheat is taken out of the pickle or brine, it should remain upon the floor, or in a basket for some hours, that the brine may run out, by which means it will require less time to dry it, and the lime should be sifted on through a sieve; if in sowing wheat, prepared as above, the day should turn out hazy or foggy, and the lime by attracting the moisture of the air into it self, should prevent the wheat from separating, so much unlimed wheat as will make it separate must be mixed with the wheat that is limed and brined. Good old seed wheat is much better than new, particularly as it is not so subject to smut. This is proved from experience.

Wheat should not be deposited more than two inches deep on strong clays or wet soils, on any account whatever; on dry soils it is not so very material. The most proper depth is readily ascertained in soils of different textures, only by observing at what depth under the surface the secondary or superficial roots of the plants are formed in the spring; in strong soils they will be found nearer the surface; in light ones, more remote from it; from two to three inches is a proper medium depth. The points of the funnels should always stand directly behind the backs of the coulter, neither inclining to one side or the other, which is effected by putting the wedges on such side of the coulters as occasion may require.

Some people not much acquainted with the properties of matter and motion, have from the narrowness of the coulters prematurely concluded, that the soil displaced by the coul-

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ters will close again before the seed is admitted into the drills; in answer to which, it is here observed, that the velocity of the coulters in passing through the soil, is so much greater than the velocity with which the soil closes up the drills, by its own spontaneous gravity; that the incisions, or drills, are constantly open for three or four inches behind the coulters; in which case it is morally impossible (if the points of the funnels are placed directly behind the backs of the coulters) that the grain or seed, with the velocity it acquires in falling through the funnels, should not be admitted into the drills, or that it should not be sufficiently covered.

That farmers may not be reduced to the necessity of sowing their lands out of condition, that is to say, when the soil is wet and clammy, every exertion ought to be made in ploughing up their lands as early as possible in the season, that the first opportunity of sowing when the soil is dry may be embraced; nothing bids fairer for success in the drill system than early sowing; in which case the plants have time to throw out or multiply so many additional stems or off-sets, as the land is able to support. But if farmers will sow early, they must plough early, otherwise strong productive soils will not be in condition to receive the seed; such extraordinary advantages have been uniformly derived from ploughing up stubbles immediately after the crops have been carried, that many intelligent experimental farmers have declared, that one furrow or earth of the plough before winter, is worth two or three in the spring.

*Directions*

*Directions for Hoeing, &c.*

This hoe (see the plate) is worked much in the same manner as a common Dutch hoe or scuffle is worked in gardens. The handle is elevated or depressed to suit the height of the person that is to work it, by an iron wedge being applied to the upper or under side of the end of the handle that goes into the socket.

Wheat and rye cannot be hoed too early in the spring, provided the soil is dry enough to admit of being previously rolled. Nothing facilitates and expedites hoeing so much as rolling, by pulverizing the soil, and levelling the surface; but ought by no means to be done, when the soil is not dry enough to quit the roller. The wings or molding plates of the hoe, which are calculated to earth up the soil to the rows of corn, so as to cause roots to issue from the first joints of the stems above the surface, which otherwise would not have existed, should never be used for the first hoeing; ought always to be used for the last hoeing, except, when land is to lie down with seeds; and used or not used, at the option of the farmer, when any intermediate hoeing is performed. The last hoeing or earthing up, should not take place till the crop is eight or ten inches high, or till the young ears of corn are so far advanced in the stems, as to be above the surface of the soil, when the earthing up is finished. The young ears of corn will, on dissecting a few stems, be found to exist (in embryo as it were) much sooner than is generally apprehended. The absurdity of rolling any crop after the young ears are formed, and of earthing up the soil before they are advanced

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in the stems above the surface of the foil, must be self-evident. In the former instance they will be crushed by the roller; in the latter, they will be smothered by the foil. The young ears of corn will be found to exist, as soon as the secondary or coronal roots are formed.

The above observations on hoeing wheat and rye, are applicable to the hoeing of spring-crops; only the first hoeing of barley, oats, &c. should take place as soon as the second blade or leaf of the young stem appears. And of beans, pease, &c. as soon as the plants may be distinguished in the rows.

The best season for hoeing, is two or three days after rain, or so soon after rain as the foil will quit the instrument in hoeing. Light dry foils may be hoed almost any time; but this is far from being the case with strong clay foils. The season for hoeing such is frequently very short and precarious; every opportunity, therefore, should be attentively watched, and eagerly embraced. The two extremes of wet and dry, are great enemies to vegetation in strong clay foils; the bad effects of the former, though difficult to guard against, are nevertheless to be remedied, in some measure, by ploughs of a better construction, and more properly conducted, than such as are commonly met with in most strong foils. For if the wing or feather of the plough-share was made nearly as wide as the intended furrow, and fixed so as to work parallel to the surface of the land, the underside of every furrow would be cut parallel to the surface; and a smooth under-floor, polished by the bottom of the plough, would

would be found beneath every furrow, forming a regular plain, with an uniform descent from the top of the ridge into the water furrows; upon which polished floor, all superfluous water, after filterating through the loose soil, or furrows turned over by the plough, would readily find its way in the water-furrow, which would prevent its stagnating in the soil, at least so as to starve the plants. But so far from guarding as much as possible against the ill effects of superfluous water thus stagnating in clay soils, the construction of the ploughs, commonly made use of in strong clays, and the method of conducting them in many parts of this kingdom, have a direct tendency to the contrary; this is done by working their ploughs in such a position, that the wing or feather of the share, being neither so wide as the intended furrow, nor parallel to the surface when at work, but forming an angle of forty or fifty degrees with the surface; or in other words, moving in an oblique direction to the same, turns over, not a square or parallel, but a triangular furrow: in which case it is self-evident, that such lands are only half ploughed; that there will be so many ridges of fast undisturbed soil, as there are furrows, forming so many troughs or trenches, and that of all the superfluous water that shall fall upon such lands, so much only as shall remain over and above filling the trenches, will be able to find its way into the water furrows; for some clay soils, indeed all soils, when puddled, will hold water, consequently so much water as the above trenches shall contain, will remain there, till it is evaporated by sun and air, starving the plants, and puddling the soil to such a degree, that the nutritive quality in the food of plants becomes so far impaired, as not to be restored; or if it should, the tender

der fibres of the roots of plants may be turned to putrefaction, so as to be incapable ever after of answering their intended purpose in promoting vegetation.

As to the bad effects of strong clay soils caking in dry weather, nothing is more easy to prevent; for there is a period, between the time that clay soils run together, so as to puddle, by superfluous wet, and the time of their caking upon the surface, that they are as tractable as need be; now this is the period, this is the juncture for hoeing; and so much land as shall be thus seasonably hoed, will not cake or crust upon the surface, as it otherwise would have done, till it has been soaked, or drenched again with rain; in which case the hoeing is to be repeated, as soon as the soil will quit the instrument, and as often as necessary; by which time the crop will begin to cover the ground, so as to act as a screen to the surface of the land, against the intense heat of the sun, and thereby prevent in a great measure, all the bad effects of the soil's caking in dry weather.

When land is to be laid down with seeds, the seeds must not be sown as usual when the grain is sown, but the day the last hoeing is to be performed, If seeds are sown when barley is sown, hoeing is excluded, consequently the great advantages of drilling are lost; but not being sown till the last hoeing is just going to take place, every purpose is answered. For the crop is not only improved by hoeing, but the soil in the spaces between the rows of corn, being cleared from the weeds, and pulverized by hoeing, will

will be in much better condition to receive the feeds; and the feeds being sown broadcast just before the last hoeing, will be incorporated with the soil by the action of the hoe, so as to vegetate better, and produce a much superior crop. The wings of the hoe may, or may not be used at all upon land that is to lie down with feeds.

Such strong weeds as may grow in the rows of corn, and out of the reach of the hoe to cut up, should be plucked up by hand, to prevent their coming to maturity, and dropping their feeds upon the soil, that has been previously made clean by hoeing,

It is here observed, that where this method of sowing grafs-seeds before the last hoeing is intended to be put in practice, the crop (which is generally barley) should be sown early, at least within the month of March, or by the middle of April, that the grafs-feed may have time to vegetate before the hot weather commences, otherwise they may be burnt up by the intense heat of the sun, as they spring out of the ground; which has been the case in a few instances last year, where the barley was not sown before the month of May: and the cause of a failure in grafs seeds has been very erroneously attributed to the above process of sowing them before the last hoeing: whereas the true cause of the failure has arisen from sowing the barley crop too late, and thereby postponing the sowing of the grafs-seeds at the last hoeing so long, that the intense heat of the sun has burnt them up as they have vegetated. Where a crop from the grafs-feed is of the  
utmost

utmost consequence to a farmer ; and the barley cannot possibly be sown early enough to admit of the grass-seeds being sown at the last hoeing ; it is recommended to sow the grass seeds as in the usual way, when the barley is sown, and forego the advantages of hoeing. In this instance it may be asked, Wherein consist the advantages of drilling, if hoeing is excluded ? In this case the advantages of drilling will consist in saving more than half the seed, and producing a crop superior to broadcast or hand sowing, though not so great as if hoeing had taken place.

The use of the above Hoe has been attended with extraordinary success in light turnip and barley soils ; but in strong clays, and soils intermixed with flints or pebbles, or what is commonly called stone-brash, the success has not been so general, owing chiefly to a neglect in working the Hoe, when the season would admit of it ; to obviate which a method of horse-hoeing is now invented, and brought to great perfection, by which three men or boys, with one horse, will hoe seven or eight acres a day, breaking up the soil between the rows of corn, if necessary, to the depth of three or four inches ; by which the land, at the same time that it produces a crop of corn, receives the benefit of a partial summer-fallow, from which process the greatest advantages are derived, not only to the present, but future crops. This method of horse-hoeing, in its present state, is particularly calculated for breaking the texture of such strong clays, or other soils, when they become so hard and dry upon the surface as to be impracticable for the hand-hoe to have its proper effect, and may

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be considered, in this light, as a preparative for using the hand-hoe upon strong soils with an advantage equal to that with which it is used upon light soils. The advantages of this method of hoeing are derived from the application more than from the construction of the Hoes, which is such, that the person who attends them is enabled to influence and direct them, so as to avoid cutting up the rows of corn, notwithstanding they may not be in straight lines, or the horse should deviate from his proper line of traction.

To such experimental agriculturists as wish to excel in the drill-system, it is recommended to convert their lands into eight feet ridges, and furnish themselves with a pair of light wheels, with an axis eight feet long within the wheels, also a pair of shafts applied to each end of the axis, so that the horses may go double, and each horse in the water-furrow. By the horses and wheels of the above carriage thus going in the furrows, the whole process of drilling and hoeing may be performed without a single foot of the horses being set upon the land, by applying the machine or hoes, when at work, to such respective parts of the above axis as may be required to draw them in any given direction.

This method of working either the Machine or Hoes, upon various soils, and in wet seasons, without the horses going upon the land, is very worthy of every attention that can possibly be paid to it by ingenious and spirited agriculturists.

Not



Not that it is here intended to be insinuated, that land arranged as above into eight feet ridges may be sown by the Machine, and worked by the Hoes, without any regard being paid to the seasonableness of the weather, or dryness of the soil; so far from it, that the very contrary is inferred, viz. that, if possible, the soil may be always dry enough to quit the wheels of the Machine, and the plates of the Hoes, when at work.—In which case, success may be relied upon, and cannot fail, if these instructions are properly attended to, and especially if the attendant on the Machine is but well disposed to follow these instructions, or rather if he is not voluntarily inclined to counteract them; for some instances have lately transpired, where husbandmen and labourers have set their faces against the Machine, from a mistaken notion of much hand-labour being annihilated by the use of it, not considering, that where the labour of one man is annihilated by the use of the Machine, the labour of fifty is created by the use of the Hoe, &c.

**T H E**

THE following accurate ascertainments of crops of corn reaped in 1786, the seed of which was sown by the said patent drill-machines, have been transmitted by the respective growers to the said James Cooke, at No. 73, (opposite the Pantheon) Oxford-street, London; where the above drill-machines are now manufactured, and where it is requested, that all orders and remittances may in future be forwarded, viz.

### Winchester Measure.

	By Mach. per ft. acre.	By Hand per ft. acre
	bush. qts.	bush. qts.
Lord Viscount Bateman, Shobdon, Herefordshire, Wheat	40 0	
Ditto, Barley, self-evidently superior to that sown by hand, but omitted to be particularly ascertained.		
Mr. Yeld, Milton, near Leominster, Herefordshire, Wheat	30 0	25 0
N. B. Weight of grain from one eighth of an acre by the machine, 240lb.		
Ditto by hand, 195lb. weight of straw ditto, by machine, 313lb. ditto by hand, 254lb.		
Rev. H. J. Close, Hill-House, Ipswich, Suffolk, Barley by the machine, from 9 bushels of seed, 400 bushels of excellent grain; also a particular experiment upon one quarter of an acre of poor land, and out of condition	33 0	19 0

## Winchester Measure.

Ditto, an experiment in oats upon adjoining land, in the same condition, produce in the same proportion

	By Mach. per ft. acre	By Hand per ft. acre
	busb. qts.	busb. qts.

Mr. Morley, Woodhall, near Downham,  
Norfolk, Wheat - - - 44 0

Mr. John Lees, Winton, near Cirencester,  
Gloucestershire, Wheat - - - 53 16

Moses Harper, Esq. Atley, near Stour-  
port, Worcestershire, Barley - - - 56 0

N. B. The land of the hand-sown crop al-  
lowed to be in better condition than  
that upon which the machine was used.

Mr. Dunmore, Stonton Wyvill, near  
Market Harbro', Northamptonshire, Wheat 45 0

Ditto Barley - - - 72 16

Marquis of Stafford, Trentham, Stafford-  
shire, Wheat - - - 33 0

Ditto, Barley, in 1785, 1l. 4s. 6d. per acre  
by the machine more than by hand-sowing.

Mr. Glover, Burloughton, near Shifnal,  
Salop, Barley from very light sandy land, 44 0

Mr. Hett, Bawtry, Yorkshire, Barley in  
1785 - - - 64 0

Mr. Boote, Atherstone, near Stratford-  
upon-Avon, Warwickshire, the 7 following  
accurate experiments, including in the whole  
368 acres, viz.

No. 1. Wheat on loamy land	-	44	0
2. Ditto on cold clay	-	44	22
3. Ditto on ditto	-	25	7
4. Ditto on ditto	-		
5. Pease on light sandy land		50	8
6. Barley on light land	-	72	16
7. Beans on light land	-	36	10

37 16

48 0

9 18

H. Cecil, Esq. Hanbury-Hall, near Droitwich, Worcestershire, wheat by the machine, five bushels per acre more than by hand-sowing, from two years experiments.

Mr. R. Crabb, Moulton-Park, near Northampton, six bushels of Barley per acre by the machine more than by hand-sowing.

Colonel Wilton, Didlington, near Stoke, Norfolk, wheat by the machine, exactly half as much more as the broad-cast.

N. B. The drill stubble very clean by hoeing—the broad-cast stubble a bed of poppies.

Sampson Barber, Esq. Peterborough, Northamptonshire, wheat by the machine, 27 quarters and 6 bushels from five acres and three perches.

Mr. William Wright, Warboys, near Huntingdon, an extraordinary crop of barley from fen-land, by the machine, allowed to be much superior to hand-sowing, but the quantity not ascertained.

Mr. Holland, Ruckland, near Louth, Lincolnshire, barley, one quarter, or 8 bushels per acre, by the machine, more than broad-cast.

Any one doubting the veracity of the above ascertainties may see the original letters, by applying to the said James Cooke, at No. 73. Oxford-street; who embraceth this opportunity of informing the public, that since the existence of the above drill-machine, many attempts have been made in different parts of the kingdom to infringe the said patentee's privileged right, of which proper notice will be taken, and that the users, as well as the venders of such infringements are equally actionable.

When it is considered that the utility of the above drill-machine has met with the approbation of the society of Arts and Sciences in London, the societies of Agriculture at Bath and Odiam, and

of Arthur Young, Esq. the author of Annals on Agriculture, together with the disinterestedness and respectability of the gentlemen who have furnished the said patentee with the above ascertainedments (from whence it appears that more than the rent of the land, over and above usual profits by hand sowing, is to be cleared by the use of the above machine) every other comment on the present occasion must needs be superfluous.

F I N I S.





